Ohio Environmental Protection Agency
Application for Modification of Ohio NPDES Permit

For Agency Use

Application Number

Date Received

Year Month Day

1. Number of permit for which modification is being requested OIL00091*ED, OH0059552

2. Name of organization responsible for facility American Energy Corporation

3. Address, location, and telephone number of facility producing discharge:

A. Name American Energy Corporation

B. Mailing Address:

1. Mailing Address 43521 Mayhugh Hill Road

2. City Beallsville

3. State Ohio 4. Zip Code 43716

C. Location:

1. Street West of State Route 145, between T.R. 82 and T.R. 103

2. City 1 mile north of Beallsville 3. County Belmont

D. Telephone No. (740) 926-9152
Area Code

4. Describe in detail the provision(s) of the permit the applicant wishes to modify.

Part I, Page 2 of 11, Item 1.

5. Describe in detail the reason a modification is desired. (See rule 3745-33-06 of the Ohio Administrative Code [formerly OEPA Regulation EP-31-06] for grounds for modification.)

Due to a proposed change in operations at the Perkins air shaft site, American Energy Corporation is requesting that Sediment Ponds 020 and 021 be utilized for pumped mine water storage and discharge, if necessary.

6. Name of receiving water or waters Piney Creek

7. Describe requested modification in sufficient detail to allow Ohio Environmental Protection Agency personnel to process your request. If a Permit to Install is required under Chapter 3745-31 of the Ohio Administrative Code (formerly Ohio EPA Regulation EP-30) attach a completed application for a Permit to Install and make no other entries in this section. If a Permit to Install is not required and additional space is needed, provide the additional information on 8-½ by 11 bond paper and mark "Item 7, Continued" in the upper left hand corner of each extra sheet.

Ponds 020 and 021 are currently utilized as sediment control structures only for the Perkins Air shaft site associated with the Century Mine. Ponds 020 and 021 are currently covered under General Construction Stormwater Permit, Facility #0GC00168*AG. The design flow for Pond 020 is 0.005 MGD, and for Pond 021 is 0.006 MGD (maximum design flows). Total suspended solids, iron and manganese are pollutants that may be expected in the untreated water. No chemicals are added to the water within the mine to be pumped. Quality of treated water will meet the effluent limitations as stated in the existing NPDES Permit #OIL00091; pH 6.5 to 9.0 S.U., iron 4.0 to 6.0 mg/l, manganese 2.0 to 4.0 mg/l, and T.S.S. 35 to 70. Soda Ash will be utilized for pH adjustment. Settling within the ponds will not required chemical additives. Currently, this air shaft is used only for providing air into the underground mining operation. American Energy Corporation (AEC) proposes to pump water from the underground mine to Ponds 020 and 021 for treatment and discharge to Piney Creek when necessary. AEC is requesting modification of Individual N.P.D.E.S. permit #OIL00091 to include Ponds 020 and 021.

[This application must be signed by the person who applied for the original permit or some other person eligible under Rule 3745-33-03(D) of the Ohio Administrative Code (formerly OEPA Regulation EP-31-03(D)].

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate.

Robert D. Moore
Printed Name of Person Signing

President
Title

11-03-04
Date Application Signed

Robert D. Moore
Signature of Applicant

Mail or take this form to the Ohio EPA District Office to which you send monitoring reports.

OEPA-NPDES-18

ATTACHMENT #1
TO ANTIDEGRADATION ADDENDUM
AMERICAN ENERGY CORPORATION
PERKINS RUN AIR SHAFT POND MODIFICATIONS

Introduction:

American Energy Corporation (AEC) proposes to pump water from the underground mine to Ponds 020 and 021 at their Perkins Run Air Shaft. Ponds 020 and 021 currently receive surface runoff from the air shaft facility only.

This document addresses the requirements of the Ohio Environmental Protection Agency Antidegradation Addendum, the *Preferred Design Alternative* is addressed on *Pages 1 thru 5*. The *Minimal Degradation Alternative* is addressed on *Pages 5 and 7*, and the *Non-Degradation Alternative* is addressed on *Pages 7 thru 9*.

Background:

Ponds 020 and 021 were approved by ODNR under an Incidental Boundary Revision in March, 2003. These ponds are currently covered under the General Stormwater Permit associated with Construction Activity, Facility No. 0GC00168*AG. The air shaft facility has established vegetation. All drainage from the air shaft facility flows to Ponds 020 and 021 via existing diversion ditches. Runoff from the access roadway is controlled by sumps. Runoff consists of surface drainage only. No coal is present on the air shaft site. Ponds 020 and 021 are existing, temporary structures which will be removed when the associated air shaft is no longer necessary for mine ventilation, approximately eight (8) years.

PREFERRED DESIGN ALTERNATIVE

Ponds 020 and 021 are located in Section 1, Township 6, Range 5, Wayne Township, Belmont County, Ohio. Pond 021 discharges to Pond 020, which discharges to an unnamed tributary to Piney Creek, in the Captina Creek watershed.

C.4.a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

There are no central or regional sewage collection or treatment facilities in the area. Long range plans for these facilities do not exist.

C.4.b. List and describe all government and/or privately sponsored conservation projects that exist or may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the affected water resource.

Telephone inquiries were made in April, 2004 to the Belmont County Engineer, the Natural Resources Conservation Service District, and the County Department of Development regarding active projects planned or underway. It was determined that there were no existing projects or planned projects for the affected water resource.

C.4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.

Preferred design alternative: Pump the water from the mine to the nearest on-site surface treatment facility where it can be tested and treated to meet requirements of the NPDES Permit before being released to the receiving stream. The procedure is more costly than the minimal degradation alternative, however, it is more reliable in terms of worker safety and mine productivity. The water will be pumped into surface ponds for treatment before being released to any surface water. The receiving ponds are both upland ponds otherwise fed by diversions from surrounding areas.

Non-degradation alternative' (s): The alternatives described would eliminate potential degradation from the immediate site; however, potential would increase, as described, in other (off-site) locations. The alternatives are: ① Pump and haul mine water by truck along public roads for a distance of approximately 55 miles to the closest approved disposal facility. Operational/ maintenance problems include cost, public road damage, and spills from haulage vehicles. ② Overland pipeline. Operational/ maintenance problems include spillage due to ruptures, stream, road, and personal property right-of-ways/crossings. ③ Allowing the water to accumulate underground. Operational/ maintenance problems include flooding of the mine and associated work stoppages. This alternative is not practicable for extended use considering the projected life of the mining operation.

Minimal degradation alternative' (s): The use of underground sumps and bulkheads would be incorporated to contain the water in the mine as it was produced. This alternative would eliminate treatment of the discharge and would minimize pumping. This alternative would be much less costly in terms of pumping and treatment than other alternatives; however, the alternative would have negative impacts on productivity, miner safety and possibly groundwater quality.

Mitigative technique/measure' (s): Both ponds will be reclaimed when bond is released by ODNR. The receiving stream will have returned to its pre-mining condition or will be in accordance with ODNR requirements.

C.4.d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

The water transfer system will be composed of pumps, discharge line and two temporary ponds. One pump will be kept on standby in case of need during a breakdown period of the main pump. The ponds will act as treatment facilities where the water can be collected, monitored, and treated as required to meet NPDES requirements. The cost of the pumps and piping will be approximately $10,000.00, (Ten Thousand Dollars) including a pump, a standby pump and one set of hoses. Reclamation of the site will cost approximately $50,000.00 (Fifty Thousand Dollars) based on current costs. The design flow for Pond 020 is 0.005 MGD, and for Pond 021 is 0.006 MGD (maximum design flows). Total suspended solids, iron and manganese are pollutants that may be expected in the untreated water. No chemicals are added to the water within the mine to be pumped. Quality of treated water will meet the effluent limitations as stated in the existing NPDES Permit #OIL00091; pH 6.5 to 9.0 S.U., iron 4.0 to 6.0 mg/l, manganese 2.0 to 4.0 mg/l, and T.S.S. 35 to 70. Soda Ash will be utilized for pH adjustment. The approximate cost of treatment could possibly reach $5,000.00 (Five Thousand Dollars) annually. Maintenance of the system may reach $5,000.00 (Five Thousand Dollars) annually. Settling within the ponds will not require chemical additives. Currently, this air shaft is used only for providing air into the underground mining operation.

C.4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged, in terms of mass and concentration.

No substances/regulated pollutants will be discharged from the treatment ponds in excess of effluent limitations. The water from the mine will be treated at the pond inlet to meet NPDES requirements before being released to the stream system.

	30 Day Average		Daily Maximum	
Parameter	Concentration (Units)	Mass * (kg/day)	Concentration (Units)	Mass * (kg/day)
Total Suspended Solids	35 mg/l	1.32	70 mg/l	2.65
Iron, Total	3.00 mg/l	0.11	6.00 mg/l	0.23
Manganese, Total	2.00 mg/l	0.08	4.00 mg/l	0.15
pH	6.50 S.U. min.		9.00 S.U. max.	
*Mass calculations completed by using concentration x 0.01 mgd flow x a conversion factor of 3.785.				

C.4.f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

The proposed excess water disposal system with associated environmental controls is the same or similar to those used successfully at the mine for many years, and in general, elsewhere throughout the coal industry. The site will be maintained to operate as designed. Repairs will be made as needed on a timely basis for full compliance with Federal and State laws.

C.4.g. Describe any impacts on human health and the overall quality and value of the water resource.

No adverse impacts on human health are anticipated under the Preferred Design Alternative. The water, which will be adversely affected by the mining operation, will be treated at the pond inlet to meet requirements of the Ohio Environmental Protection Agency's N.P.D.E.S. permit before being released to the receiving stream.

C.4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated.

Introduction

This question will be addressed in two parts: First, the general demand for electrical energy will be discussed and secondly, the aspects of the market which are specific to this project will be addressed. These are both areas of economic consideration which must be considered in regulation of the coal industry.

General Demand

Coal provides the most efficient and economical method of generating electrical energy and will continue to provide this service for a number of years in the future. More than half of the electrical energy consumed in the United States is generated by coal burning facilities. Over 80% of the electricity consumed in the State of Ohio is produced by coal fired power plants. (6 tons of coal is required to provide the electricity consumed by each individual annually).

Wind, solar, and hydro power generation methods are not capable of meeting the demand at this time. Nuclear energy represents too large a potential for long term environmental and safety impacts. The supply of natural gas is not sufficient nor is the distribution system adequate to meet the demands of the electrical generating industry.

The demand for electricity has increased by over 100% since 1970. Furthermore, there has been a disproportionately small increase in generating capacity during that time. Demand for electrical energy is projected to increase by another 30% to 40% between now and the year 2020. (References: State Senator Louis Blessing for the Ohio Coal Association, and Eric Burkland, President of the Ohio Manufacturers' Association)

Project Specifics

The loss to the local economy would be significant should the employment opportunity not be permitted to develop. Belmont County, Ohio, the location of this operation, is categorized as a distressed county by the Ohio Department of Development, Office of Strategic Research. This means that unemployment is 125% or greater than the most recent U.S. 5 year average unemployment rate; per capita income is at or below 80% of the U.S. per capita income; and 20% or more of the population lives below the poverty level.

The mining operation associated with the air shaft site ponds supports the direct employment of 404 people during the necessary life of the air shaft which is estimated to be 8 years. During this time, $22,595,156.00 *(Twenty-Two Million, Five Hundred Ninety-Five Thousand, One Hundred Fifty-Six Dollars)* will be paid in annual payrolls. $1,723,843.00 *(One Million, Seven Hundred Twenty-Three Thousand, Eight Hundred Forty-Three Dollars)* will be paid in annual payroll taxes. Over $6,400,000.00 *(Six Million, Four Hundred Dollars)* in other taxes will be paid annually. $66,992.00 *(Sixty-Six Thousand, Nine Hundred Ninety-Two Dollars)* in annual royalties will be paid.

In all, this mining operation contributes over $30,800,000.00 (Thirty Million, Eight Hundred Thousand Dollars) annually to the economy of this economically distressed area. This figure represents the value in current Dollars and does not account for inflation over the life of the operation.

It has been statistically proven that for every mining job created or maintained, between four and ten jobs are created or maintained in related industries or services. These related industries and services include: utility supply, transportation, material and fuel supply, and other activities which directly or indirectly support the mining operation. It may also include domestic services such as lawn and garden maintenance and day care and baby sitting services employed by the mining personnel and their families.

There are other benefits which will trickle down into the local economy. General merchants experience sales from the mine employees which they would not experience if the group were unemployed, were employed in other geographic locations, or were employed in lesser paying jobs.

C.4.i. Describe environmental benefits to be realized through this proposed project.

When the air shaft is no longer necessary for mine ventilation, it will be plugged and the entire site will be reclaimed in accordance with ODNR requirements. Following establishment of vegetative cover, Ponds 020 and 021 will be removed and their respective affected areas reclaimed per ODNR regulations. Potential end uses include farm land, pasture for livestock, or wildlife habitat. No environmental benefits will be realized through this proposal.

C.4.j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

There should be no loss of social or economic benefits from this operation. If the mine operation is not allowed to dispose of excess water in this manner, the economic benefits outlined in the previous section C.4.h. will not be maintained. The employment provided serves to improve economic conditions in the area.

The area is a rural site. It does not support any degree of tourist activity. Recreational activity includes hunting and ATV use only with the permission of the surface property owner. This activity will not be impacted in any way by the pumping of mine water to the ponds or reclamation of same.

There are no streams on site. All water that discharges as a result of the pumping operation will be treated, if necessary, to be within effluent limits established by the existing NPDES Permit.

C.4.k. Describe the environmental benefits lost as a result of this project. Include the effects on aquatic life, wildlife, threatened or endangered species.

There are no significant adverse impacts expected to water quality on or off site. The maintenance, water monitoring, treatment and reclamation proposed have been designed to mitigate or eliminate any possible adverse affects on wildlife.

There are no known threatened or endangered species in the project area.

C.4.l. Description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

No construction will occur within the banks of any surface water. The surface water will receive discharge from the ponds only. This discharge will be treated at the pond inlet to meet NPDES limitations before being released.

MINIMAL DEGRADATION ALTERNATIVE

C.4.a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

Please see response to this item on page 1 of this document.

C.4.b. List and describe all government and/or privately sponsored conservation projects that exist or may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the affected water resource.

Please see response to this item on page 1 of this document.

C.4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.

Please see response to this item (minimal degradation) on page 2 of this document.

C.4.d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

The water transfer system will consist of installing sumps and bulkheads in the underground workings to contain the water. The installations would be made away from the working face so that interference with mining operations would be minimized; however failure of a bulkhead could jeopardize the safety of workmen or interfere with the mining operation. Due to unknowns such as where water will be encountered, the quantity of water that will require storage underground, and maintenance needs, cost is very difficult to estimate.

C.4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged, in terms of mass and concentration.

Please see response to this item on page 2 of this document.

C.4.f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

Please see response to item C.4.c. (Minimal Degradation Alternative) on page 2 of this document.

C.4.g. Describe any impacts on human health and the overall quality and value of the water resource.

Please see response to item C.4.c. (Minimal Degradation Alternative) on page 2 of this document.

C.4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated.

Please see response to this item on pages 3 and 4 of this document.

C.4.i. Describe environmental benefits to be realized through this proposed project.

Please see response to this item on page 4 of this document.

C.4.j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

Please see response to this item on page 4 of this document.

C.4.k. Describe the environmental benefits lost as a result of this project. Include the effects on aquatic life, wildlife, threatened or endangered species.

Please see response to this item on page 5 of this document. There are no known threatened or endangered species in the project area.

C.4.l. Description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

There is no fill, or structures within a streambed on this site. Pond 020 is no closer than 80 feet from the stream bank, and Pond 021 is over 100 feet from the stream.

NON-DEGRADATION ALTERNATIVE

C.4.a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

Please see response to this item on page 1 of this document.

C.4.b. List and describe all government and/or privately sponsored conservation projects that exist or may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the affected water resource.

Please see response to this item on page 2 of this document. (Non-Degradation Alternative).

C.4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.

Please see response to this item on page 2 of this document. (Non-Degradation Alternative).

C.4.d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

None of these three alternatives are practical from a cost, permitting, political/public relations, or operational standpoint. Please see response to this item on page 2 of this document (Non-Degradation Alternative).

C.4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged, in terms of mass and concentration.

Under the non-degradation alternative, no substances will be purposely discharged.

C.4.f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

No on-site discharge is proposed under this alternative. For reliability, see response to item C.4.c. on Page 2.

C.4.g. Describe any impacts on human health and the overall quality and value of the water resource.

The potential for impacts to human health and the overall quality of the water resource would be much greater under the non-degradation alternatives than under either the preferred or minimal alternatives. There could be no protection provided for surface waters. Soil liners, diversion ditches, treatment ponds, hay bales, silt fences and temporary sumps are proposed in the two previous alternatives. These features cannot be provided to protect all potential contamination sites in an overland operation which is not confined to permitted areas.

C.4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated.

The condition of the local economy and the economic benefits of this mining operation were discussed in earlier alternatives. In this situation, the non-degradation alternatives may actually shorten the life of the mine.

C.4.i. Describe environmental benefits to be realized through this proposed project.

If any of the non-degradation disposal plans are undertaken, there would be no direct change in the existing environmental conditions. Ponds on the site could not be utilized for treatment or discharge of mine water; however, the potential for unintentional (accidental), untreatable discharges would be much higher.

C.4.j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

It is impossible to estimate the social and economic losses as a result of public and political relations concerning difficulties related to rights of way and rights of entry required for crossing public and private lands and roads with trucks or a pipeline, as well as negotiating the agreements necessary to use another disposal facility. There is no commercial or recreational use of water resources involved.

C.4.k. Describe the environmental benefits lost as a result of this project. Include the effects on aquatic life, wildlife, threatened or endangered species.

There could be unintentional, unforeseen impacts as previously described in the item C.4.c. response on page 2. If spillage from trucks or pipeline leakage occurred, the threat to aquatic life and wildlife could be far reaching, as well as difficult to detect or correct.

C.4.l. Description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

Under the non-degradation alternative, no construction work, fill or other structures would be placed in or near a stream bed.

Mitigative Technique/Measure'(s):

No mitigation is planned. Waters being discharged will be treated to meet requirements of the NPDES permit prior to being released to receiving waters.

9-88

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 20
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

Applicant's Name AMERICAN ENERGY CORPORATION Pond # 020

Type of impoundment EXCAVATED Permanent _____ Temporary X

1. POND DRAINAGE AREA DATA:

a) Drainage area 10.7 acres
b) Disturbed area 10.7 acres
c) Ave. land slope 25 %
d) Hydrologic soil group C
e) Hydraulic length 1000 ft.
f) Cover/condition of the undisturbed area N/A

2. DESIGN STORM CRITERIA:

a) Method:

1) Design method (s) including computer programs: SEDCAD 4.0
2) SCS curve number 87

b) Rainfall Amount/Peak Flow	Rainfall, in.	Peak flow, cfs.
1) 10 year, 24 hour =	3.7	9.3
2) 25 year, 24 hour =	4.2	11.2
3) 50 year, 6 hour = (if permanent)		
4) 100 year, 6 hour = (if 20/20 size)		

3. POND SIZE: N/A EXCAVATED POND

a) Dimensions:
1) Dam height _____ ft.
2) Dam width _____ ft. (MIN)
3) Dam length _____ ft.
4) Dam downstream slope _____ % (MAX)
5) Dam upstream slope _____ % (MAX)
6) Core length _____ ft. _____ ft. _____ ft

b) Sediment storage volume 0.6 ac.-ft. is provided below the 1072.2 foot elevation.

c) Stage/Area Data:	Elevation ft.	Surface Area ac.	Volume ac.-ft.
1) Bottom of pond	1068	0.053	0.00
2) Streambed at upstream toe:			
3) Principal spillway crest:			
4) Emergency spillway crest:	1072.2	0.23	0.6
5) Top of embankment:	1074	0.3	1.1

4. PRINCIPAL SPILLWAY: N/A EXCAVATED POND

a) Pipe length _____ ft.
b) Pipe diameter _____ in.
c) Pipe slope _____ %
d) Riser diameter _____ in.
e) Riser height _____ ft.
f) Type of pipe _____
g) Number of anti-seep collars _____; spacing along pipe _____
h) Does the design include a trash rack? _____ Yes, _____ No.
i) Does the design include an anti-vortex device? _____ Yes, _____ No.

5. EMERGENCY SPILLWAY/EXIT CHANNEL:

a) Base width 15 ft.
b) Design flow depth 0.2 ft. Depth in level section 0.5 ft.
c) Exit slope 33 %
d) Exit velocity 4.5 fps
e) Channel lining ROCK RIPRAP
f) Side slopes 2:1
g) Freeboard 1.2 ft.
h) Entrance slope 50 %
i) Length of level section 20 ft.

6. The minimum static factor of safety for this impoundment is 1.5

7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.

8. COMMENTS
THIS IS THE SECOND POND IN A SIERIES OF TWO. POND 021 WILL TREAT 0.5 ACRE-FEET, POND 020 WILL TREAT 0.6 ACRE FEET.

9. Is this an MSHA structure? _____ Yes, X No. If "yes," provide the MSHA ID. Number if one has been assigned _____.

10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with rule 1501:13-9-04(H) (2) of the Administrative Code.

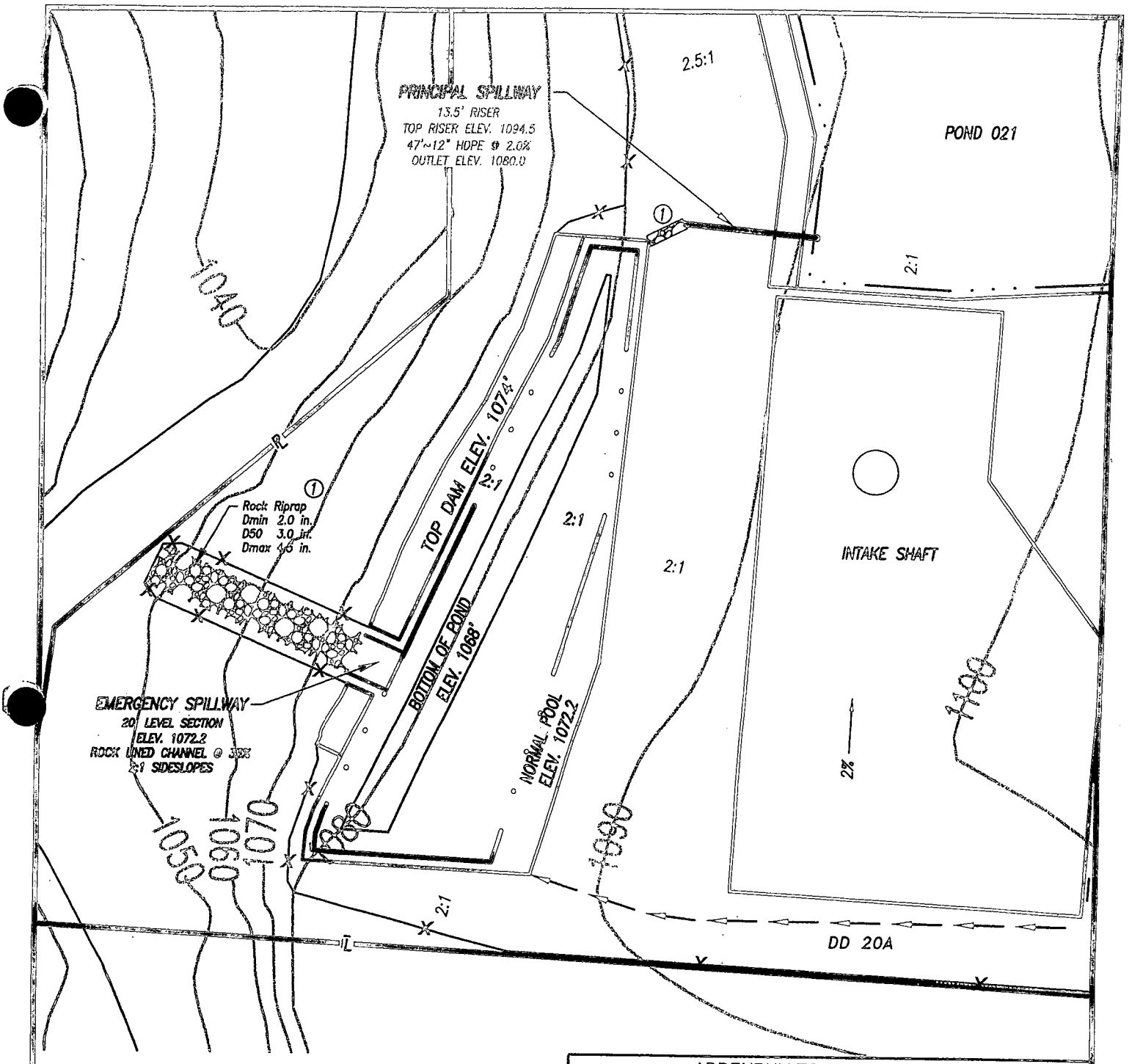
11. I hereby certify that this impoundment is designed to comply with the applicable requirements of rule 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.

Donald M Brafford
Signature

1-9-03
Date

P.E. SEAL

STATE OF OHIO
DONALD M. BRAFFORD
E-29449
REGISTERED PROFESSIONAL ENGINEER



3-7-03
① Revised per ODNR by JCC

STATE OF OHIO
DONALD M. BRAFFORD
E-46419
REGISTERED
PROFESSIONAL ENGINEER

ADDENDUM TO ATTACHMENT 20

EXCAVATED POND 020

Applicant: AMERICAN ENERGY CORPORATION		
Permit Number: D-0425		
Township: WAYNE		County: BELMONT
Page: 1 of 1		Scale: 1"=50'
Date:01/08/03	Date Revised: 1/28/03	Comm #02001-S

Jack A. HAMILTON & Associates, Inc.
342 High St., Box 471
Flushing, Ohio 43977
Ph: (740) 968-4947
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e-mail: hamilton@1st.net
www.hamiltonandassoc.com

02001-S AEC Century Shaft\POND020.dwg

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 20
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

Applicant's Name AMERICAN ENERGY CORPORATION Pond # 021

Type of impoundment EMBANKMENT Permanent _____ Temporary X

1. POND DRAINAGE AREA DATA:

a) Drainage area 6.3 acres
b) Disturbed area 6.3 acres
c) Ave. land slope 25 %
d) Hydrologic soil group C
e) Hydraulic length 900 ft.
f) Cover/condition of the undisturbed area N/A

2. DESIGN STORM CRITERIA:

a) Method:

1) Design method (s) including computer programs: SEDCAD 4.0
2) SCS curve number 87

b) Rainfall Amount/Peak Flow	Rainfall, in.	Peak flow, cfs.
1) 10 year, 24 hour =	3.7	10.5
2) 25 year, 24 hour =	4.2	12.4
3) 50 year, 6 hour = (if permanent)		
4) 100 year, 6 hour = (if 20/20 size)		

3. POND SIZE: N/A EXCAVATED POND

a) Dimensions:
1) Dam height 16 ft.
2) Dam width 10 ft. (MIN)
3) Dam length 605 ft.
4) Dam downstream slope 40 % (MAX)
5) Dam upstream slope 40 % (MAX)
6) Core length 605 ft. 10 ft. 5 ft.

b) Sediment storage volume 0.5 ac.-ft. is provided below the 1094.5 foot elevation.

c) Stage/Area Data:	Elevation ft.	Surface Area ac.	Volume ac.-ft.
1) Bottom of pond	1094.1	1.23	0.0
2) Streambed at upstream toe:			
3) Principal spillway crest:	1094.5	1.27	0.5
4) Emergency spillway crest:	1094.9	1.31	1.0
5) Top of embankment:	1096	1.43	2.5

Revised 1/28/03

POND # 021

4. PRINCIPAL SPILLWAY: N/A EXCAVATED POND

a) Pipe length 47 ft.
b) Pipe diameter 12 in.
c) Pipe slope 2.0 %
d) Riser diameter 18 in.
e) Riser height 13.5 ft.
f) Type of pipe Corrugated HDPE
g) Number of anti-seep collars 2 ; spacing along pipe 15
h) Does the design include a trash rack? _____ Yes, X No.
i) Does the design include an anti-vortex device? _____ Yes, X No.

5. EMERGENCY SPILLWAY/EXIT CHANNEL:

a) Base width 15 ft.
b) Design flow depth * ft. Depth in level section * ft.
c) Exit slope * %
d) Exit velocity * fps
e) Channel lining Vegetative
f) Side slopes 2:1
g) Freeboard 1.1 ft.
h) Entrance slope 40 %
i) Length of level section 20 ft.

6. The minimum static factor of safety for this impoundment is 1.5

7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.

8. COMMENTS
THIS IS THE FIRST POND IN A SIERIES OF TWO. POND 021 WILL TREAT 0.5 ACRE-FEET, POND 020 WILL TREAT 0.6 ACRE FEET.

THIS POND IS TO BE OVER EXCAVATED TO AN ELEVATION OF 1080. THE POND WILL THEN BE FILLED WITH WASTE TAILINGS FROM DRILLING UP TO ELEVATION 1094.1.

* THIS POND DOES NOT HAVE ENOUGH RUNOFF TO OVERFLOW INTO THE EMERGENCY SPILLWAY.

9. Is this an MSHA structure? _____ Yes, X No. If "yes," provide the MSHA ID. Number if one has been assigned _____.

10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with rule 1501:13-9-04(H) (2) of the Administrative Code.

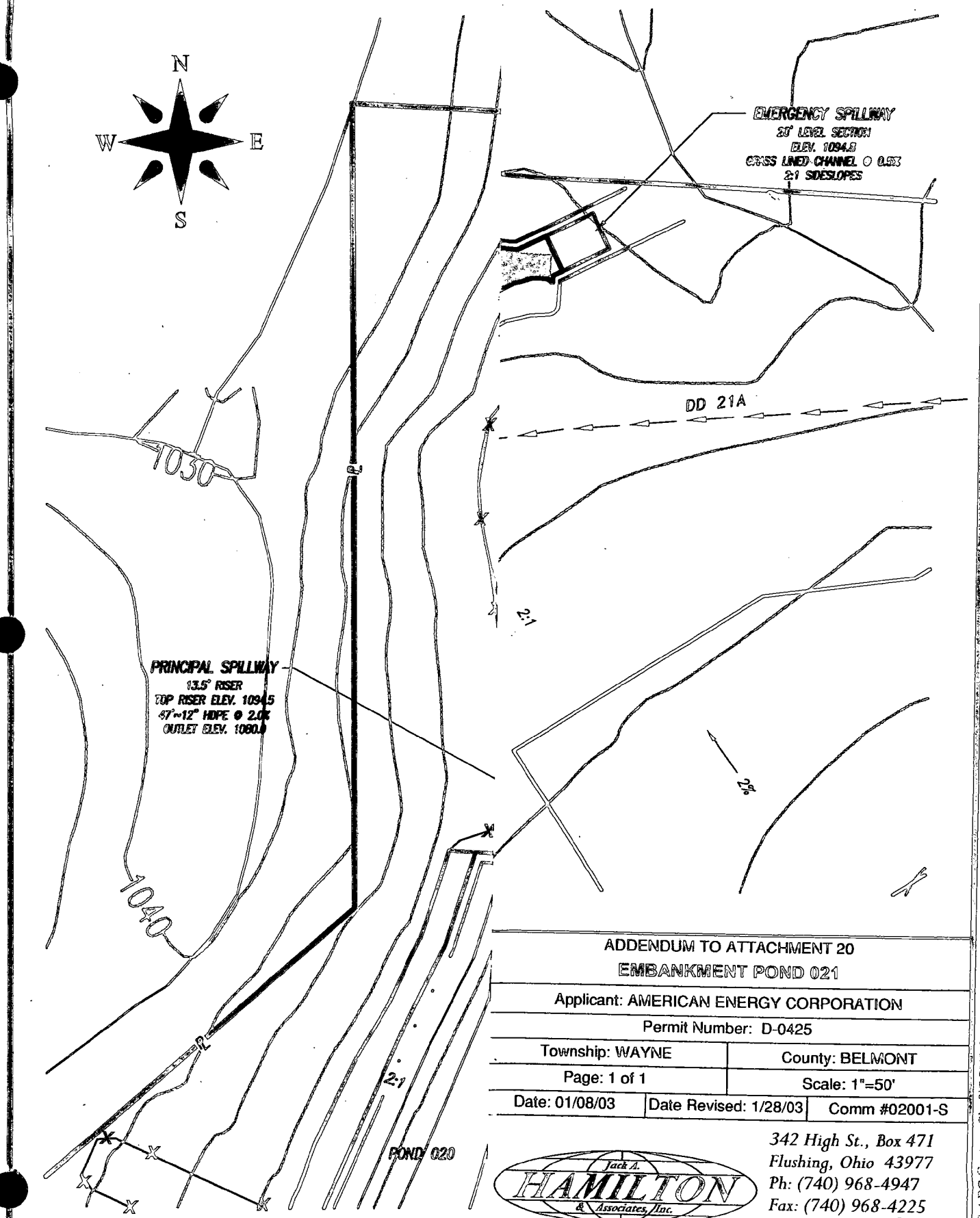
11. I hereby certify that this impoundment is designed to comply with the applicable requirements of rule 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.

Signature

3-7-06
Date

STATE OF OHIO
DONALD M. BRAFFORD
E-29449
REGISTERED PROFESSIONAL ENGINEER

Revised 1/28/03



ADDENDUM TO ATTACHMENT 20

EMBANKMENT POND 021

Applicant: AMERICAN ENERGY CORPORATION		
Permit Number: D-0425		
Township: WAYNE		County: BELMONT
Page: 1 of 1		Scale: 1"=50'
Date: 01/08/03	Date Revised: 1/28/03	Comm #02001-S

Jack A. HAMILTON & Associates, Inc.
342 High St., Box 471
Flushing, Ohio 43977
Ph: (740) 968-4947
Fax: (740) 968-4225
e-mail: hamilton@1st.net
www.hamiltonandassoc.com

02001-S AEC Century Shaft\POND021.dwg

342 High St., Box 471
Flushing, OH 43977
Ph: (740) 968-4947
Fax: (740) 968-4225
email: hamilton@1st.net
www.hamiltonandassoc.com

Jack A. HAMILTON & Associates, Inc.

Civil Engineering
Land Surveying
Mine Permitting
GIS Data Services
Land Development
Global Positioning Systems

September 23, 2004

Re: Belmont County
American Energy Corp., Century Mine
OIL00091*GD
NPDES Modification

Ms. Abbot Stevenson
Ohio Environmental Protection Agency
Southeast District Office
2195 Front Street
Logan, OH 43138

Dear Abbot,

In response to your letter dated September 1, 2004, requesting additional information for processing of the above referenced permitting action, (Perkins Run Air Shaft ponds) the following information is being submitted, or was revised as necessary.

1. Copies of the pond designs are attached.

2. A fee check for $200.00 made payable to "Treasurer, State of Ohio" is attached.

3. Provided the requested information. See revised response to the Application for Modification of Ohio NPDES Permit, Item 7., as well as the revised responses to items C.4.d. and C.4.e. in Attachment 1 to the Antidegradation Addendum, pages 2 and 3.

4. See revised response to the Application for Modification of Ohio NPDES Permit, Item 7., as well as the revised response to item C.4.d. in Attachment 1 to the Antidegradation Addendum, page 2.

If you have any questions concerning these revisions, please do not hesitate to contact me at the number shown above.

Sincerely,

Jack A. Hamilton & Associates, Inc.
Consultants for American Energy Corp.

Ellen Greer

Ellen Greer
Permitting

c: Melanie Murray, American Energy Corp.

14. Attachments. The following are included in this application package (indicate how many copies of each are provided):

4 Detail Plans	_____ Management Plan
_____ Engineering Report	_____ Hydrogeologic Site Investigation Report
_____ Engineering Specifications	_____ Other (describe):_____

15. Form B Submission (check all that apply)

	Form
☒ Sewer(none) (Pipeline) and Pump Station Construction	B1 (responded per site-specific for project)
☐ On-Site Sanitary Wastewater Disposal	B2
☐ Wastewater Treatment Plants Less Than 100,000 GPD	B3
☐ Wastewater Treatment Plants Greater Than or Equal to 100,000 GPD and all Pond Systems	B4
☐ Industrial Direct Discharge Facility	B5
☐ Industrial Indirect Discharge Facility	B6
☐ Underground Storage Tank Remediation	B7
☐ Livestock Waste	B8
☐ Land Application or Sludge Management Plan	B9

16. Fee Calculations:

Permit to Install (maximum total fee $15,100)

a. Application fee:	$ 100.00
b. Plan review fee:	$ 100.00
c. Plan review fee (installation/construction cost x.0065):	$ 4,563.00
d. Total Fee (a + b+ c):	$ 4,763.00

Land Application*/Livestock Plan Approval

a. Application fee:	$ 0
b. Plan review fee:	$ 0
c. Total fee (a + b):	$ 0

*No separate fee is needed for land application of treated wastewater if the management plan is submitted as part of the PTI application system installation.

17. Signature of the Applicant: (see Ohio Administrative Code 3745-31-04)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision and that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are substantial penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Typed name: Robert D. Moore
Title: President
Signature: _____
Date: _____

14. **Attachments.** The following are included in this application package (indicate how many copies of each are provided):

4 Detail Plans	_____ Management Plan
_____ Engineering Report	_____ Hydrogeologic Site Investigation Report
_____ Engineering Specifications	_____ Other (describe):_____

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	Form
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☐ Wastewater Treatment Plants Greater Than or Equal to 100,000 GPD and all Pond Systems	B4
☐ Industrial Direct Discharge Facility	B5
☐ Industrial Indirect Discharge Facility	B6
☐ Underground Storage Tank Remediation	B7
☐ Livestock Waste	B8
☐ Land Application or Sludge Management Plan	B9

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Permit to Install (maximum total fee $15,100)

a. Application fee:	$ 100.00
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Typed name: Robert D. Moore
Title: President
Signature: _____
Date: _____

14. **Attachments.** The following are included in this application package (indicate how many copies of each are provided):

__4__ Detail Plans
_____ Engineering Report
_____ Engineering Specifications
_____ Management Plan
_____ Hydrogeologic Site Investigation Report
_____ Other (describe):_____

15. **Form B Submission** (check all that apply)

		Form
☒	Sewer(none) (Pipeline) and Pump Station Construction	B1 (responded per site-specific for project)
☐	On-Site Sanitary Wastewater Disposal	B2
☐	Wastewater Treatment Plants Less Than 100,000 GPD	B3
☐	Wastewater Treatment Plants Greater Than or Equal to 100,000 GPD and all Pond Systems	B4
☐	Industrial Direct Discharge Facility	B5
☐	Industrial Indirect Discharge Facility	B6
☐	Underground Storage Tank Remediation	B7
☐	Livestock Waste	B8
☐	Land Application or Sludge Management Plan	B9

16. **Fee Calculations:**

Permit to Install (maximum total fee $15,100)

a. Application fee:	$ 100.00
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c. Total fee (a + b):	$ 0

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17. **Signature of the Applicant:** (see Ohio Administrative Code 3745-31-04)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision and that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are substantial penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Typed name: Robert D. Moore
Title: President
Signature: _____
Date: _____

Ohio Environmental Protection Agency
Application for Modification of Ohio NPDES Permit

For Agency Use

Application Number

Date Received

Year Month Day

1. Number of permit for which modification is being requested OIL00091*ED, OH0059552

2. Name of organization responsible for facility American Energy Corporation

3. Address, location, and telephone number of facility producing discharge:

A. Name American Energy Corporation

B. Mailing Address:

1. Mailing Address 43521 Mayhugh Hill Road

2. City Beallsville

3. State Ohio 4. Zip Code 43716

C. Location:

1. Street West of State Route 145, between T.R. 82 and T.R. 103

2. City 1 mile north of Beallsville 3. County Belmont

D. Telephone No. (740) 926-9152
Area Code

4. Describe in detail the provision(s) of the permit the applicant wishes to modify.

Part I, Page 2 of 11, Item 1.

5. Describe in detail the reason a modification is desired. (See rule 3745-33-06 of the Ohio Administrative Code [formerly OEPA Regulation EP-31-06] for grounds for modification.)

Due to a proposed change in operations at the Perkins air shaft site, American Energy Corporation is requesting that Sediment Ponds 020 and 021 be utilized for pumped mine water storage and discharge, if necessary.

6. Name of receiving water or waters Piney Creek

7. Describe requested modification in sufficient detail to allow Ohio Environmental Protection Agency personnel to process your request. If a Permit to Install is required under Chapter 3745-31 of the Ohio Administrative Code (formerly Ohio EPA Regulation EP-30) attach a completed application for a Permit to Install and make no other entries in this section. If a Permit to Install is not required and additional space is needed, provide the additional information on 8-½ by 11 bond paper and mark "Item 7, Continued" in the upper left hand corner of each extra sheet.

Ponds 020 and 021 are currently utilized as sediment control structures only for the Perkins Air shaft site associated with the Century Mine. Ponds 020 and 021 are currently covered under General Construction Stormwater Permit, Facility #0GC00168*AG. The design flow for Pond 020 is 0.005 MGD, and for Pond 021 is 0.006 MGD (maximum design flows). Total suspended solids, iron and manganese are pollutants that may be expected in the untreated water. No chemicals are added to the water within the mine to be pumped. Quality of treated water will meet the effluent limitations as stated in the existing NPDES Permit #OIL00091; pH 6.5 to 9.0 S.U., iron 4.0 to 6.0 mg/l, manganese 2.0 to 4.0 mg/l, and T.S.S. 35 to 70. Soda Ash will be utilized for pH adjustment. Settling within the ponds will not required chemical additives. Currently, this air shaft is used only for providing air into the underground mining operation. American Energy Corporation (AEC) proposes to pump water from the underground mine to Ponds 020 and 021 for treatment and discharge to Piney Creek when necessary. AEC is requesting modification of Individual N.P.D.E.S. permit #OIL00091 to include Ponds 020 and 021.

[This application must be signed by the person who applied for the original permit or some other person eligible under Rule 3745-33-03(D) of the Ohio Administrative Code (formerly OEPA Regulation EP-31-03(D)].

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate.

Robert D. Moore
Printed Name of Person Signing

President
Title

Date Application Signed

Signature of Applicant

Mail or take this form to the Ohio EPA District Office to which you send monitoring reports.

OEPA-NPDES-18

ATTACHMENT #1
TO ANTIDEGRADATION ADDENDUM
AMERICAN ENERGY CORPORATION
PERKINS RUN AIR SHAFT POND MODIFICATIONS

Introduction:

American Energy Corporation (AEC) proposes to pump water from the underground mine to Ponds 020 and 021 at their Perkins Run Air Shaft. Ponds 020 and 021 currently receive surface runoff from the air shaft facility only.

This document addresses the requirements of the Ohio Environmental Protection Agency Antidegradation Addendum, the *Preferred Design Alternative* is addressed on *Pages 1 thru 5*. The *Minimal Degradation Alternative* is addressed on *Pages 5 and 7*, and the *Non-Degradation Alternative* is addressed on *Pages 7 thru 9*.

Background:

Ponds 020 and 021 were approved by ODNR under an Incidental Boundary Revision in March, 2003. These ponds are currently covered under the General Stormwater Permit associated with Construction Activity, Facility No. 0GC00168*AG. The air shaft facility has established vegetation. All drainage from the air shaft facility flows to Ponds 020 and 021 via existing diversion ditches. Runoff from the access roadway is controlled by sumps. Runoff consists of surface drainage only. No coal is present on the air shaft site. Ponds 020 and 021 are existing, temporary structures which will be removed when the associated air shaft is no longer necessary for mine ventilation, approximately eight (8) years.

PREFERRED DESIGN ALTERNATIVE

Ponds 020 and 021 are located in Section 1, Township 6, Range 5, Wayne Township, Belmont County, Ohio. Pond 021 discharges to Pond 020, which discharges to an unnamed tributary to Piney Creek, in the Captina Creek watershed.

C.4.a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

There are no central or regional sewage collection or treatment facilities in the area. Long range plans for these facilities do not exist.

C.4.b. List and describe all government and/or privately sponsored conservation projects that exist or may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the affected water resource.

Telephone inquiries were made in April, 2004 to the Belmont County Engineer, the Natural Resources Conservation Service District, and the County Department of Development regarding active projects planned or underway. It was determined that there were no existing projects or planned projects for the affected water resource.

C.4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.

Preferred design alternative: Pump the water from the mine to the nearest on-site surface treatment facility where it can be tested and treated to meet requirements of the NPDES Permit before being released to the receiving stream. The procedure is more costly than the minimal degradation alternative, however, it is more reliable in terms of worker safety and mine productivity. The water will be pumped into surface ponds for treatment before being released to any surface water. The receiving ponds are both upland ponds otherwise fed by diversions from surrounding areas.

Non-degradation alternative' (s): The alternatives described would eliminate potential degradation from the immediate site; however, potential would increase, as described, in other (off-site) locations. The alternatives are: ① Pump and haul mine water by truck along public roads for a distance of approximately 55 miles to the closest approved disposal facility. Operational/ maintenance problems include cost, public road damage, and spills from haulage vehicles. ② Overland pipeline. Operational/ maintenance problems include spillage due to ruptures, stream, road, and personal property right-of-ways/crossings. ③ Allowing the water to accumulate underground. Operational/ maintenance problems include flooding of the mine and associated work stoppages. This alternative is not practicable for extended use considering the projected life of the mining operation.

Minimal degradation alternative' (s): The use of underground sumps and bulkheads would be incorporated to contain the water in the mine as it was produced. This alternative would eliminate treatment of the discharge and would minimize pumping. This alternative would be much less costly in terms of pumping and treatment than other alternatives; however, the alternative would have negative impacts on productivity, miner safety and possibly groundwater quality.

Mitigative technique/measure' (s): Both ponds will be reclaimed when bond is released by ODNR. The receiving stream will have returned to its pre-mining condition or will be in accordance with ODNR requirements.

C.4.d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

The water transfer system will be composed of pumps, discharge line and two temporary ponds. One pump will be kept on standby in case of need during a breakdown period of the main pump. The ponds will act as treatment facilities where the water can be collected, monitored, and treated as required to meet NPDES requirements. The cost of the pumps and piping will be approximately $10,000.00, (Ten Thousand Dollars) including a pump, a standby pump and one set of hoses. Reclamation of the site will cost approximately $50,000.00 (Fifty Thousand Dollars) based on current costs. The design flow for Pond 020 is 0.005 MGD, and for Pond 021 is 0.006 MGD (maximum design flows). Total suspended solids, iron and manganese are pollutants that may be expected in the untreated water. No chemicals are added to the water within the mine to be pumped. Quality of treated water will meet the effluent limitations as stated in the existing NPDES Permit #OIL00091; pH 6.5 to 9.0 S.U., iron 4.0 to 6.0 mg/l, manganese 2.0 to 4.0 mg/l, and T.S.S. 35 to 70. Soda Ash will be utilized for pH adjustment. The approximate cost of treatment could possibly reach $5,000.00 (Five Thousand Dollars) annually. Maintenance of the system may reach $5,000.00 (Five Thousand Dollars) annually. Settling within the ponds will not require chemical additives. Currently, this air shaft is used only for providing air into the underground mining operation.

C.4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged, in terms of mass and concentration.

No substances/regulated pollutants will be discharged from the treatment ponds in excess of effluent limitations. The water from the mine will be treated at the pond inlet to meet NPDES requirements before being released to the stream system.

	30 Day Average		Daily Maximum	
Parameter	Concentration (Units)	Mass * (kg/day)	Concentration (Units)	Mass * (kg/day)
Total Suspended Solids	35 mg/l	1.32	70 mg/l	2.65
Iron, Total	3.00 mg/l	0.11	6.00 mg/l	0.23
Manganese, Total	2.00 mg/l	0.08	4.00 mg/l	0.15
pH	6.50 S.U. min.		9.00 S.U. max.	
*Mass calculations completed by using concentration x 0.01 mgd flow x a conversion factor of 3.785.				

C.4.f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

The proposed excess water disposal system with associated environmental controls is the same or similar to those used successfully at the mine for many years, and in general, elsewhere throughout the coal industry. The site will be maintained to operate as designed. Repairs will be made as needed on a timely basis for full compliance with Federal and State laws.

C.4.g. Describe any impacts on human health and the overall quality and value of the water resource.

No adverse impacts on human health are anticipated under the Preferred Design Alternative. The water, which will be adversely affected by the mining operation, will be treated at the pond inlet to meet requirements of the Ohio Environmental Protection Agency's N.P.D.E.S. permit before being released to the receiving stream.

C.4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated.

Introduction

This question will be addressed in two parts: First, the general demand for electrical energy will be discussed and secondly, the aspects of the market which are specific to this project will be addressed. These are both areas of economic consideration which must be considered in regulation of the coal industry.

General Demand

Coal provides the most efficient and economical method of generating electrical energy and will continue to provide this service for a number of years in the future. More than half of the electrical energy consumed in the United States is generated by coal burning facilities. Over 80% of the electricity consumed in the State of Ohio is produced by coal fired power plants. (6 tons of coal is required to provide the electricity consumed by each individual annually).

Wind, solar, and hydro power generation methods are not capable of meeting the demand at this time. Nuclear energy represents too large a potential for long term environmental and safety impacts. The supply of natural gas is not sufficient nor is the distribution system adequate to meet the demands of the electrical generating industry.

The demand for electricity has increased by over 100% since 1970. Furthermore, there has been a disproportionately small increase in generating capacity during that time. Demand for electrical energy is projected to increase by another 30% to 40% between now and the year 2020. (References: State Senator Louis Blessing for the Ohio Coal Association, and Eric Burkland, President of the Ohio Manufacturers' Association)

Project Specifics

The loss to the local economy would be significant should the employment opportunity not be permitted to develop. Belmont County, Ohio, the location of this operation, is categorized as a distressed county by the Ohio Department of Development, Office of Strategic Research. This means that unemployment is 125% or greater than the most recent U.S. 5 year average unemployment rate; per capita income is at or below 80% of the U.S. per capita income; and 20% or more of the population lives below the poverty level.

The mining operation associated with the air shaft site ponds supports the direct employment of 404 people during the necessary life of the air shaft which is estimated to be 8 years. During this time, $22,595,156.00 *(Twenty-Two Million, Five Hundred Ninety-Five Thousand, One Hundred Fifty-Six Dollars)* will be paid in annual payrolls. $1,723,843.00 *(One Million, Seven Hundred Twenty-Three Thousand, Eight Hundred Forty-Three Dollars)* will be paid in annual payroll taxes. Over $6,400,000.00 *(Six Million, Four Hundred Dollars)* in other taxes will be paid annually. $66,992.00 *(Sixty-Six Thousand, Nine Hundred Ninety-Two Dollars)* in annual royalties will be paid.

In all, this mining operation contributes over $30,800,000.00 (Thirty Million, Eight Hundred Thousand Dollars) annually to the economy of this economically distressed area. This figure represents the value in current Dollars and does not account for inflation over the life of the operation.

It has been statistically proven that for every mining job created or maintained, between four and ten jobs are created or maintained in related industries or services. These related industries and services include: utility supply, transportation, material and fuel supply, and other activities which directly or indirectly support the mining operation. It may also include domestic services such as lawn and garden maintenance and day care and baby sitting services employed by the mining personnel and their families.

There are other benefits which will trickle down into the local economy. General merchants experience sales from the mine employees which they would not experience if the group were unemployed, were employed in other geographic locations, or were employed in lesser paying jobs.

C.4.i. Describe environmental benefits to be realized through this proposed project.

When the air shaft is no longer necessary for mine ventilation, it will be plugged and the entire site will be reclaimed in accordance with ODNR requirements. Following establishment of vegetative cover, Ponds 020 and 021 will be removed and their respective affected areas reclaimed per ODNR regulations. Potential end uses include farm land, pasture for livestock, or wildlife habitat. No environmental benefits will be realized through this proposal.

C.4.j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

There should be no loss of social or economic benefits from this operation. If the mine operation is not allowed to dispose of excess water in this manner, the economic benefits outlined in the previous section C.4.h. will not be maintained. The employment provided serves to improve economic conditions in the area.

The area is a rural site. It does not support any degree of tourist activity. Recreational activity includes hunting and ATV use only with the permission of the surface property owner. This activity will not be impacted in any way by the pumping of mine water to the ponds or reclamation of same.

There are no streams on site. All water that discharges as a result of the pumping operation will be treated, if necessary, to be within effluent limits established by the existing NPDES Permit.

C.4.k. Describe the environmental benefits lost as a result of this project. Include the effects on aquatic life, wildlife, threatened or endangered species.

There are no significant adverse impacts expected to water quality on or off site. The maintenance, water monitoring, treatment and reclamation proposed have been designed to mitigate or eliminate any possible adverse affects on wildlife.

There are no known threatened or endangered species in the project area.

C.4.l. Description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

No construction will occur within the banks of any surface water. The surface water will receive discharge from the ponds only. This discharge will be treated at the pond inlet to meet NPDES limitations before being released.

MINIMAL DEGRADATION ALTERNATIVE

C.4.a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

Please see response to this item on page 1 of this document.

C.4.b. List and describe all government and/or privately sponsored conservation projects that exist or may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the affected water resource.

Please see response to this item on page 1 of this document.

C.4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.

Please see response to this item (minimal degradation) on page 2 of this document.

C.4.d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

The water transfer system will consist of installing sumps and bulkheads in the underground workings to contain the water. The installations would be made away from the working face so that interference with mining operations would be minimized; however failure of a bulkhead could jeopardize the safety of workmen or interfere with the mining operation. Due to unknowns such as where water will be encountered, the quantity of water that will require storage underground, and maintenance needs, cost is very difficult to estimate.

C.4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged, in terms of mass and concentration.

Please see response to this item on page 2 of this document.

C.4.f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

Please see response to item C.4.c. (Minimal Degradation Alternative) on page 2 of this document.

C.4.g. Describe any impacts on human health and the overall quality and value of the water resource.

Please see response to item C.4.c. (Minimal Degradation Alternative) on page 2 of this document.

C.4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated.

Please see response to this item on pages 3 and 4 of this document.

C.4.i. Describe environmental benefits to be realized through this proposed project.

Please see response to this item on page 4 of this document.

C.4.j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

Please see response to this item on page 4 of this document.

C.4.k. Describe the environmental benefits lost as a result of this project. Include the effects on aquatic life, wildlife, threatened or endangered species.

Please see response to this item on page 5 of this document. There are no known threatened or endangered species in the project area.

C.4.l. Description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

There is no fill, or structures within a streambed on this site. Pond 020 is no closer than 80 feet from the stream bank, and Pond 021 is over 100 feet from the stream.

NON-DEGRADATION ALTERNATIVE

C.4.a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

Please see response to this item on page 1 of this document.

C.4.b. List and describe all government and/or privately sponsored conservation projects that exist or may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the affected water resource.

Please see response to this item on page 2 of this document. (Non-Degradation Alternative).

C.4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.

Please see response to this item on page 2 of this document. (Non-Degradation Alternative).

C.4.d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

None of these three alternatives are practical from a cost, permitting, political/public relations, or operational standpoint. Please see response to this item on page 2 of this document (Non-Degradation Alternative).

C.4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged, in terms of mass and concentration.

Under the non-degradation alternative, no substances will be purposely discharged.

C.4.f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

No on-site discharge is proposed under this alternative. For reliability, see response to item C.4.c. on Page 2.

C.4.g. Describe any impacts on human health and the overall quality and value of the water resource.

The potential for impacts to human health and the overall quality of the water resource would be much greater under the non-degradation alternatives than under either the preferred or minimal alternatives. There could be no protection provided for surface waters. Soil liners, diversion ditches, treatment ponds, hay bales, silt fences and temporary sumps are proposed in the two previous alternatives. These features cannot be provided to protect all potential contamination sites in an overland operation which is not confined to permitted areas.

C.4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated.

The condition of the local economy and the economic benefits of this mining operation were discussed in earlier alternatives. In this situation, the non-degradation alternatives may actually shorten the life of the mine.

C.4.i. Describe environmental benefits to be realized through this proposed project.

If any of the non-degradation disposal plans are undertaken, there would be no direct change in the existing environmental conditions. Ponds on the site could not be utilized for treatment or discharge of mine water; however, the potential for unintentional (accidental), untreatable discharges would be much higher.

C.4.j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

It is impossible to estimate the social and economic losses as a result of public and political relations concerning difficulties related to rights of way and rights of entry required for crossing public and private lands and roads with trucks or a pipeline, as well as negotiating the agreements necessary to use another disposal facility. There is no commercial or recreational use of water resources involved.

C.4.k. Describe the environmental benefits lost as a result of this project. Include the effects on aquatic life, wildlife, threatened or endangered species.

There could be unintentional, unforeseen impacts as previously described in the item C.4.c. response on page 2. If spillage from trucks or pipeline leakage occurred, the threat to aquatic life and wildlife could be far reaching, as well as difficult to detect or correct.

C.4.l. Description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

Under the non-degradation alternative, no construction work, fill or other structures would be placed in or near a stream bed.

Mitigative Technique/Measure'(s):

No mitigation is planned. Waters being discharged will be treated to meet requirements of the NPDES permit prior to being released to receiving waters.

9-88

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 20
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

Applicant's Name AMERICAN ENERGY CORPORATION Pond # 020

Type of impoundment EXCAVATED Permanent _____ Temporary X

1. POND DRAINAGE AREA DATA:

a) Drainage area 10.7 acres
b) Disturbed area 10.7 acres
c) Ave. land slope 25 %
d) Hydrologic soil group C
e) Hydraulic length 1000 ft.
f) Cover/condition of the undisturbed area N/A

2. DESIGN STORM CRITERIA:

a) Method:

1) Design method (s) including computer programs: SEDCAD 4.0
2) SCS curve number 87

b) Rainfall Amount/Peak Flow	Rainfall, in.	Peak flow, cfs.
1) 10 year, 24 hour =	3.7	9.3
2) 25 year, 24 hour =	4.2	11.2
3) 50 year, 6 hour = (if permanent)		
4) 100 year, 6 hour = (if 20/20 size)		

3. POND SIZE: N/A EXCAVATED POND

a) Dimensions:
1) Dam height _____ ft.
2) Dam width _____ ft. (MIN)
3) Dam length _____ ft.
4) Dam downstream slope _____ % (MAX)
5) Dam upstream slope _____ % (MAX)
6) Core length _____ ft. _____ ft. _____ ft

b) Sediment storage volume 0.6 ac.-ft. is provided below the 1072.2 foot elevation.

c) Stage/Area Data:	Elevation ft.	Surface Area ac.	Volume ac.-ft.
1) Bottom of pond	1068	0.053	0.00
2) Streambed at upstream toe:			
3) Principal spillway crest:			
4) Emergency spillway crest:	1072.2	0.23	0.6
5) Top of embankment:	1074	0.3	1.1

4. PRINCIPAL SPILLWAY: N/A EXCAVATED POND

a) Pipe length _____ ft.
b) Pipe diameter _____ in.
c) Pipe slope _____ %
d) Riser diameter _____ in.
e) Riser height _____ ft.
f) Type of pipe _____
g) Number of anti-seep collars _____; spacing along pipe _____
h) Does the design include a trash rack? _____ Yes, _____ No.
i) Does the design include an anti-vortex device? _____ Yes, _____ No.

5. EMERGENCY SPILLWAY/EXIT CHANNEL:

a) Base width 15 ft.
b) Design flow depth 0.2 ft. Depth in level section 0.5 ft.
c) Exit slope 33 %
d) Exit velocity 4.5 fps
e) Channel lining ROCK RIPRAP
f) Side slopes 2:1
g) Freeboard 1.2 ft.
h) Entrance slope 50 %
i) Length of level section 20 ft.

6. The minimum static factor of safety for this impoundment is 1.5

7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.

8. COMMENTS
THIS IS THE SECOND POND IN A SIERIES OF TWO. POND 021 WILL TREAT 0.5 ACRE-FEET, POND 020 WILL TREAT 0.6 ACRE FEET.

9. Is this an MSHA structure? _____ Yes, X No. If "yes," provide the MSHA ID. Number if one has been assigned _____.

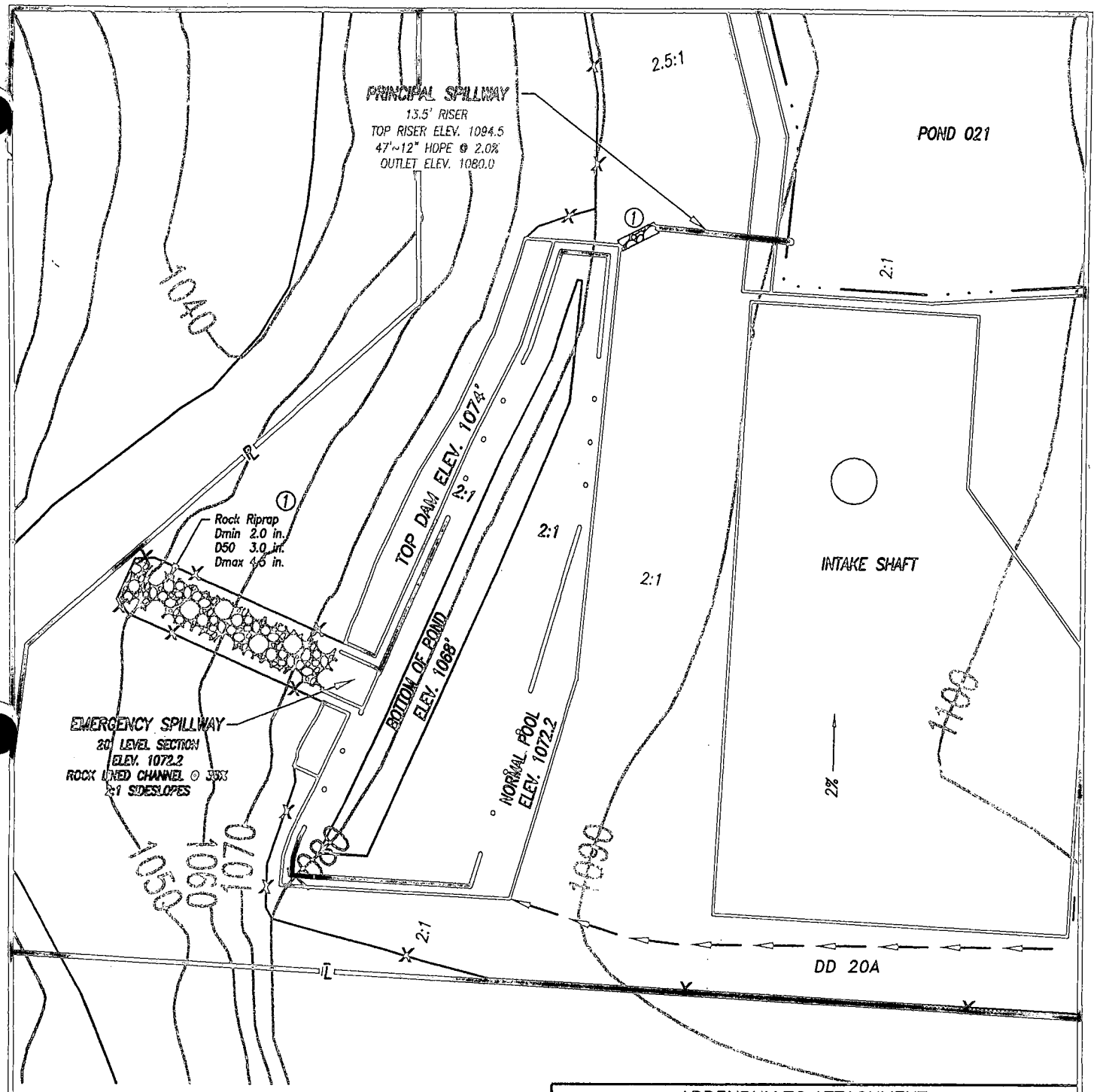
10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with rule 1501:13-9-04(H) (2) of the Administrative Code.

11. I hereby certify that this impoundment is designed to comply with the applicable requirements of rule 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.

Donald M Brafford
Signature

1-9-03
Date

P.E. SEAL



N

W E

S

3-7-03

① Revised per ODNR by JCC

STATE OF OHIO
DONALD M. BRAFFORD
E-64419
REGISTERED
PROFESSIONAL ENGINEER

ADDENDUM TO ATTACHMENT 20

EXCAVATED POND 020

Applicant: AMERICAN ENERGY CORPORATION		
Permit Number: D-0425		
Township: WAYNE		County: BELMONT
Page: 1 of 1		Scale: 1"=50'
Date:01/08/03	Date Revised: 1/28/03	Comm #02001-S

Jack A. HAMILTON & Associates, Inc.

342 High St., Box 471
Flushing, Ohio 43977
Ph: (740) 968-4947
Fax: (740) 968-4225
e-mail: hamilton@1st.net
www.hamiltonandassoc.com

02001-S AEC Century Shaft\POND020.dwg

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 20
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

Applicant's Name AMERICAN ENERGY CORPORATION Pond # 021

Type of impoundment EMBANKMENT Permanent _____ Temporary X

1. POND DRAINAGE AREA DATA:

a) Drainage area 6.3 acres
b) Disturbed area 6.3 acres
c) Ave. land slope 25 %
d) Hydrologic soil group C
e) Hydraulic length 900 ft.
f) Cover/condition of the undisturbed area N/A

2. DESIGN STORM CRITERIA:

a) Method:

1) Design method (s) including computer programs: SEDCAD 4.0
2) SCS curve number 87

b) Rainfall Amount/Peak Flow

	Rainfall, in.	Peak flow, cfs.
1) 10 year, 24 hour =	3.7	10.5
2) 25 year, 24 hour =	4.2	12.4
3) 50 year, 6 hour = (if permanent)		
4) 100 year, 6 hour = (if 20/20 size)		

3. POND SIZE: N/A EXCAVATED POND

a) Dimensions:
1) Dam height 16 ft.
2) Dam width 10 ft. (MIN)
3) Dam length 605 ft.
4) Dam downstream slope 40 % (MAX)
5) Dam upstream slope 40 % (MAX)
6) Core length 605 ft. 10 ft. 5 ft.

b) Sediment storage volume 0.5 ac.-ft. is provided below the 1094.5 foot elevation.

c) Stage/Area Data:

	Elevation ft.	Surface Area ac.	Volume ac.-ft.
1) Bottom of pond	1094.1	1.23	0.0
2) Streambed at upstream toe:			
3) Principal spillway crest:	1094.5	1.27	0.5
4) Emergency spillway crest:	1094.9	1.31	1.0
5) Top of embankment:	1096	1.43	2.5

4. PRINCIPAL SPILLWAY: N/A EXCAVATED POND

a) Pipe length 47 ft.
b) Pipe diameter 12 in.
c) Pipe slope 2.0 %
d) Riser diameter 18 in.
e) Riser height 13.5 ft.
f) Type of pipe Corrugated HDPE
g) Number of anti-seep collars 2 ; spacing along pipe 15
h) Does the design include a trash rack? _____ Yes, X No.
i) Does the design include an anti-vortex device? _____ Yes, X No.

5. EMERGENCY SPILLWAY/EXIT CHANNEL:

a) Base width 15 ft.
b) Design flow depth * ft. Depth in level section * ft.
c) Exit slope * %
d) Exit velocity * fps
e) Channel lining Vegetative
f) Side slopes 2:1
g) Freeboard 1.1 ft.
h) Entrance slope 40 %
i) Length of level section 20 ft.

6. The minimum static factor of safety for this impoundment is 1.5

7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.

8. COMMENTS
THIS IS THE FIRST POND IN A SIERIES OF TWO. POND 021 WILL TREAT 0.5 ACRE-FEET, POND 020 WILL TREAT 0.6 ACRE FEET.

THIS POND IS TO BE OVER EXCAVATED TO AN ELEVATION OF 1080. THE POND WILL THEN BE FILLED WITH WASTE TAILINGS FROM DRILLING UP TO ELEVATION 1094.1.

* THIS POND DOES NOT HAVE ENOUGH RUNOFF TO OVERFLOW INTO THE EMERGENCY SPILLWAY.

9. Is this an MSHA structure? _____ Yes, X No. If "yes," provide the MSHA ID. Number if one has been assigned _____.

10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with rule 1501:13-9-04(H) (2) of the Administrative Code.

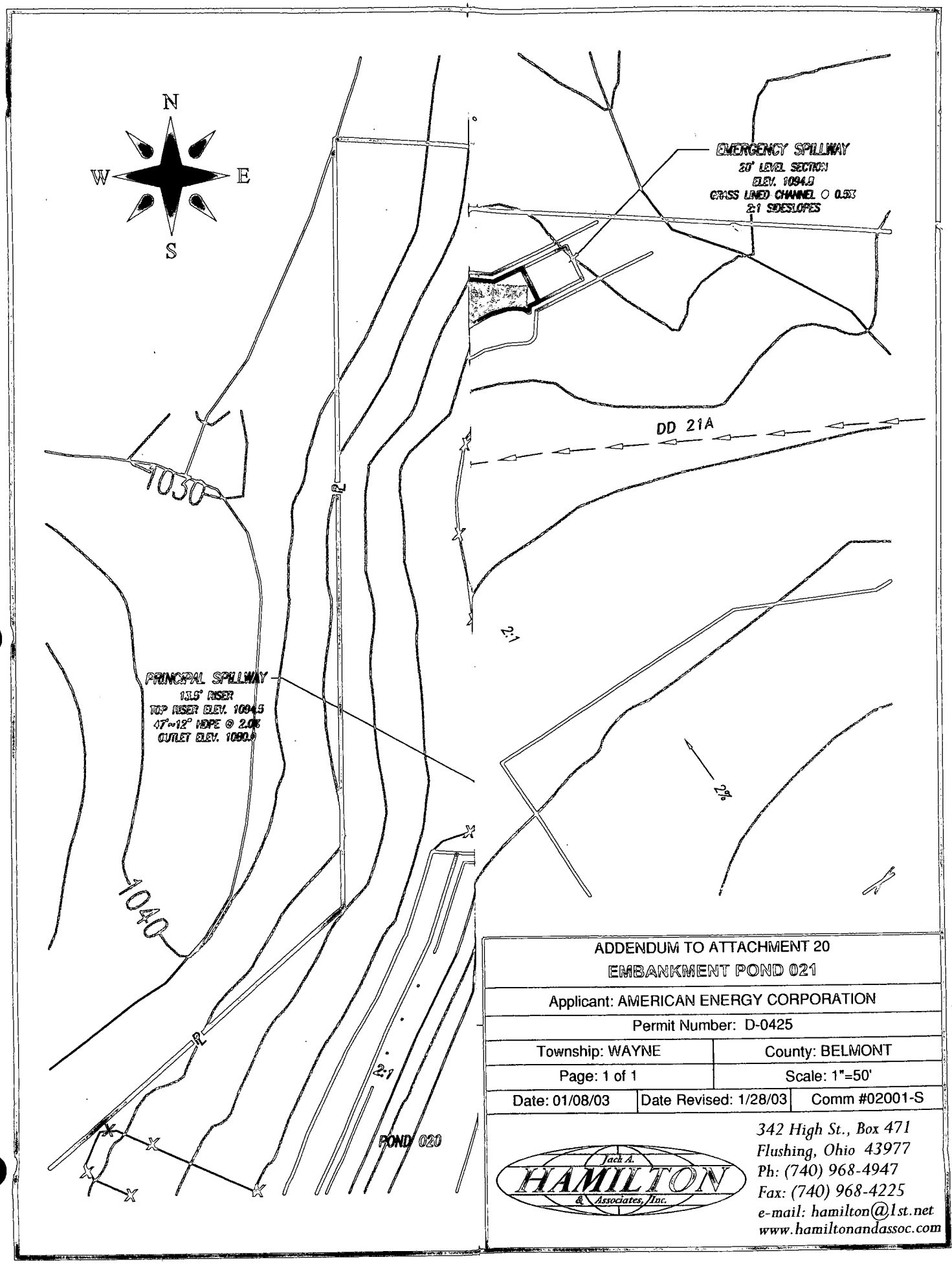
11. I hereby certify that this impoundment is designed to comply with the applicable requirements of rule 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.

Signature

3-7
Date

STATE OF OHIO
DONALD M. BRAFFORD
E-29449
REGISTERED PROFESSIONAL ENGINEER

Revised 1/28/03



ADDENDUM TO ATTACHMENT 20 EMBANKMENT POND 021		
Applicant: AMERICAN ENERGY CORPORATION		
Permit Number: D-0425		
Township: WAYNE		County: BELMONT
Page: 1 of 1		Scale: 1"=50'
Date: 01/08/03	Date Revised: 1/28/03	Comm #02001-S

Jack A. HAMILTON & Associates, Inc.

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02001-S AEC Century Shaft\POND021.dwg

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Jack A. HAMILTON & Associates, Inc.

Civil Engineering
Land Surveying
Mine Permitting
GIS Data Services
Land Development
Global Positioning Systems

LETTER OF TRANSMITTAL

TO: Melanie Murray
American Energy Corporation
43521 Mayhugh Hill Road
Beallsville, OH 43716

DATE: July 7, 2004
COMM.# 02001-2
RE: NPDES Modification / Antidegradation Addendum for Perkins Air Shaft Ponds

WE ARE SENDING: ☒ Attached ☐ Under Separate Cover

BY THE FOLLOWING METHOD: U.S. Mail

DATE	NO.	DESCRIPTION
	1	N.P.D.E.S. Modification Form (Needs signed on 2nd page)
	1	Antidegradation (4-page) form (Needs signed on 4th page)
	1	Attachment 1 Addendum to Antidegradation Addendum
	2	Location Maps (one for submittal and one for your files)

THESE ARE TRANSMITTED: ☒ For Your Use ☒ As Requested ☒ For Review/Comment ☐ Returned

REMARKS: Dear Melanie, Would you please review the attached documents. If you concur, have Rob Moore sign where indicated, and return package to me for submittal to O.E.P.A. I know that Mr. Burdette wanted this to happen as quickly as possible.

Please don't hesitate to call if you have any questions.

FORGOT TO ENCLOSE THIS WITH THE SUBJECT MATERIALS!

COPY TO File

SIGNED Ellen Hixon

Sent 7/14/04

Ohio Environmental Protection Agency
Application for Modification of Ohio NPDES Permit

For Agency Use

Application Number

Date Received

Year Month Day

1. Number of permit for which modification is being requested OIL00091*ED, OH0059552

2. Name of organization responsible for facility American Energy Corporation

3. Address, location, and telephone number of facility producing discharge:

A. Name American Energy Corporation

B. Mailing Address:

1. Mailing Address 43521 Mayhugh Hill Road

2. City Beallsville

3. State Ohio 4. Zip Code 43716

C. Location:

1. Street West of State Route 145, between T.R. 82 and T.R. 103

2. City 1 mile north of Beallsville 3. County Belmont

D. Telephone No. (740) 926-9152
Area Code

4. Describe in detail the provision(s) of the permit the applicant wishes to modify.

Part I, Page 2 of 11, Item 1.

5. Describe in detail the reason a modification is desired. (See rule 3745-33-06 of the Ohio Administrative Code [formerly OEPA Regulation EP-31-06] for grounds for modification.)

Due to a proposed change in operations at the Perkins air shaft site, American Energy Corporation is requesting that Sediment Ponds 020 and 021 be utilized for pumped mine water storage and discharge, if necessary.

6. Name of receiving water or waters Piney Creek

7. Describe requested modification in sufficient detail to allow Ohio Environmental Protection Agency personnel to process your request. If a Permit to Install is required under Chapter 3745-31 of the Ohio Administrative Code (formerly Ohio EPA Regulation EP-30) attach a completed application for a Permit to Install and make no other entries in this section. If a Permit to Install is not required and additional space is needed, provide the additional information on 8-½ by 11 bond paper and mark "Item 7, Continued" in the upper left hand corner of each extra sheet.

Ponds 020 and 021 are currently utilized as sediment control structures only for the Perkins Air shaft site associated with the Century Mine. Ponds 020 and 021 are currently covered under General Construction Stormwater Permit, Facility #0GC00168*AG. American Energy Corporation proposes to pump water from the underground mine to Ponds 020 and 021 for treatment and discharge to Piney Creek when necessary. AEC is requesting modification of Individual N.P.D.E.S. permit #OIL00091 to include Ponds 020 and 021.

[This application must be signed by the person who applied for the original permit or some other person eligible under Rule 3745-33-03(D) of the Ohio Administrative Code (formerly OEPA Regulation EP-31-03(D)].

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate.

Robert D. Moore
Printed Name of Person Signing

President
Title

July 14, 2004
Date Application Signed

RLW 7/12/04

Signature of Applicant

RLW 7/13/04

Mail or take this form to the Ohio EPA District Office to which you send monitoring reports.

OEPA-NPDES-18

Ohio EPA

State of Ohio Environmental Protection Agency
DIVISION OF SURFACE WATER

Antidegradation Addendum

In accordance with Ohio Administrative Code 3745-1-05, (Antidegradation), additional information may be required to complete your application for a permit to install or NPDES permit. For any application that may result in an increase in the level of pollutants being discharged (NPDES and/or PTI) or for which there might be activity taking place within a stream bed, the processing of the permit(s) may be required to go through procedures as outlined in the antidegradation rule. The rule outlines procedures for public notification and participation as well as procedures pertaining to the levels of review necessary. The levels of review necessary depend on the degradation being considered/requested. The rule also outlines exclusions from portions of the application and review requirements and waivers that the Director may grant as specified in Section 3745-1-05(D) of the rule. Please complete the following questions. The answers provided will allow the Ohio EPA to determine if additional information is needed. **All projects that require both an NPDES and PTI should submit both applications simultaneously to avoid going through the antidegradation process separately for each permit.**

A. **Applicant:** AMERICAN ENERGY CORPORATION

Facility Owner: AMERICAN ENERGY CORPORATION

Facility Location (city and county): (NORTH OF) ALLEDONIA, BELMONT COUNTY

Application or Plans Prepared By: Jack A. Hamilton & Associates, Inc.

Project Name: Perkins Air Shaft Sediment Ponds

NPDES Permit Number (if applicable): OH0012661 / OIL00046/OGC00168*AG

B. **Antidegradation Applicability**

Is the application for? (check as many as apply):

____ Application with no direct surface water discharge (Projects that do not meet the applicability section of 3745-1-05(B)1, i.e., on site disposal, extensions of sanitary sewers, spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

____ Renewal NPDES application or PTI application with no requested increase in loading of currently permitted pollutants (Complete Section E. Do not complete Sections C or D).

____ PTI and NPDES application for a new wastewater treatment works that will discharge to a surface water. (Complete Sections C and E)

_X_ An expansion/modification of an existing wastewater treatment works discharging to a surface water that will result in any of the following (PTI and NPDES): (Complete Section C and E)
- addition of any pollutant not currently in the discharge, or
- an increase in mass or concentration of any pollutant currently in the discharge, or
- an increase in any current pollutant limitation in terms of mass or concentration.

_____ PTI that involves placement of fill or installation of any portion of a sewerage system (i.e., sanitary sewers, pump stations, WWTP, etc.)within 150 feet of a stream bed. Please provide information requested on the stream evaluation addendum (i.e., number of stream crossings, fill placement, etc.) and complete section E.

_____ Initial NPDES permit for an existing treatment works with a wastewater discharge prior to October 1, 1996. (Complete Sections D and E)

_____ Renewal NPDES permit or modification to an effective NPDES permit that will result in any of the following: (Complete Section C and E)
- a new permit limitation for a pollutant that previously had no limitation, or
- an increase in any mass or concentration limitation of any pollutant that currently has a limitation.

C. Antidegradation Information

1. Does the PTI and/or NPDES permit application meet an exclusion as outlined by OAC 3745-1-05(D)(1) of the Antidegradation rule?

   _____ Yes (Complete Question C.2)

   __X__ No (Complete Questions C.3 and C.4)

2. For projects that would be eligible for exclusions provide the following information.

   a. Provide justification for the exclusion.

   b. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

   c. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

3. Are your requesting a waiver as outlined by OAC 3745-1-05(D)(2-7) of the Antidegradation rule?

   __X__ No

   _____ Yes

   If you wish to pursue one of the waivers, please identify the waiver and submit the necessary information to support the request. Depending on the waiver requested, the information required under question C.4 may be required to complete the application.

4. For all projects that do <u>not</u> qualify for an exclusion a report must accompany this application evaluating the preferred design alternative, non-degradation alternatives, minimal degradation alternatives, and mitigative techniques/measures for the design and operation of the activity. The information outlined below should be addressed in this report. If a waiver is requested, this section is still required.

   See Attachment #1 to Antidegradation Addendum

   a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents. **See Attachment #1 to Antidegradation Addendum**

   b.

c. List and describe all government and/or privately sponsored conservation projects that may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the effected water resource.

d. Proved a brief description below of all treatment/disposal alternatives evaluated for this application. (If additional space is needed please attach to the end of this addendum).

Preferred design alternative: _____

_____

_____

Non-degradation alternative'(s): _____

_____

_____

Minimal degradation alternative'(s): _____

_____

_____

Mitigative technique/measure'(s): _____

_____

_____

At a minimum, the following information must be included in the report for each alternative evaluated.

e. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

f. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

g. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

h. Describe any impacts to human health and the overall quality and value of the water resource.

i. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.

j. Describe environmental benefits to be realized through this proposed degradation.

k. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

See Attachment #1 to Antidegradation Addendum for responses to item b. through k.

l. Describe the environmental benefits lost as a result of this project. Include the impact on the aquatic life, wildlife, threatened or endangered species.

m. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

n. Provide any other information that may be useful in evaluating this application.

See Attachment #1 to Antidegradation Addendum for responses to items l. through m.

D. Discharge Information

1. For treatment/disposal systems constructed pursuant to a previously issued Ohio EPA PTI, provide the following information:
PTI Number _____-_____
PTI Issuance Date _____
Initial Date of Discharge _____

2. Has the appropriate NPDES permit application form been submitted including representative effluent data?

_____ Yes

_____ No

If no, submit the information as applicable under **a OR b** as follows:

a. For entities discharging process wastewater attach a completed 2C form.

b. For entities discharging wastewater of domestic origin attach the results of at least one chemical analysis of the wastestream for all pollutants for which authorization to discharge is being requested and a measurement of the daily volume (gallons per day) of wastewaters being discharge.

E. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete.

This section must be signed by the same responsible person who signed the accompanying permit application or certification as per 40 CFR 122.22.

Signature _____

Date July 14, 2004

h:revised.adm
June 30, 1997

RJ 7/13/04
RLW 7/13/04

ATTACHMENT #1
TO ANTIDEGRADATION ADDENDUM
AMERICAN ENERGY CORPORATION
PERKINS RUN AIR SHAFT POND MODIFICATIONS

Introduction:

American Energy Corporation (AEC) proposes to pump water from the underground mine to Ponds 020 and 021 at their Perkins Run Air Shaft. Ponds 020 and 021 currently receive surface runoff from the air shaft facility only.

This document addresses the requirements of the Ohio Environmental Protection Agency Antidegradation Addendum, the *Preferred Design Alternative* is addressed on *Pages 1 thru 5* The *Minimal Degradation Alternative* is addressed on *Pages 5 and 6* and the *Non-Degradation Alternative* is addressed on *Pages 6 thru 8.*

Background:

Ponds 020 and 021 were approved by ODNR under an Incidental Boundary Revision in March, 2003. These ponds are currently covered under the General Stormwater Permit associated with Construction Activity, Facility No. OGC00168*AG. The air shaft facility has established vegetation. All drainage from the air shaft facility flows to Ponds 020 and 021 via existing diversion ditches. Runoff from the access roadway is controlled by sumps. Runoff consist off surface drainage only. No coal is present on the air shaft site. Ponds 020 and 021 are existing, temporary structures which will be removed when the associated air shaft is no longer necessary for mine ventilation, approximately eight (8) years.

PREFERRED DESIGN ALTERNATIVE

Ponds 020 and 021 are located in Section 1, Township 6, Range 5, Wayne Township, Belmont County, Ohio. Pond 021 discharges to Pond 020, which discharges to an unnamed tributary to Piney Creek, in the Captina Creek watershed.

C.4.a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

There are no central or regional sewage collection or treatment facilities in the area. Long range plans for these facilities do not exist.

C.4.b. List and describe all government and/or privately sponsored conservation projects that exist or may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the affected water resource.

Telephone inquiries were made in April, 2004 to the Belmont County Engineer, the Natural Resources Conservation Service District, and the County Department of Development regarding active projects planned or underway. It was determined that there were no existing or planned projects for the affected water resources.

C.4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.

Preferred design alternative: Pump the water from the mine to the nearest on-site surface treatment facility where it can be tested and treated to meet requirements of the NPDES Permit before being released to the receiving stream. The procedure is more costly than the minimal degradation alternative, however, it is more reliable in terms of worker safety and mine productivity. The water will be pumped into surface ponds for treatment before being released to any surface water. The receiving ponds are both upland ponds otherwise fed by diversions from surrounding areas.

Non-degradation alternative' (s): The alternatives described would eliminate potential degradation from the immediate site; however, potential would increase, as described, in other (off-site) locations. The alternative are: ① Pump and haul mine water by truck along public roads for a distance of approximately 55 miles to the closest approved disposal facility. Operational/ maintenance problems include cost, public road damage, and spills from haulage vehicles. ② Overland pipeline. Operational/ maintenance problems include spillage due to ruptures, stream, road, and personal property rights-of-way/crossings. ③ Allowing the water to accumulate underground. Operational/ maintenance problems include flooding of the mine and associated work stoppages. This alternative is not practicable for extended use considering the projected life of the mining operation.

Minimal degradation alternative' (s): The use of underground sumps and bulkheads would be incorporated to contain the water in the mine as it was produced. This alternative would eliminate treatment of the discharge and would minimize pumping. This alternative would be much less costly in terms of pumping and treatment than other alternatives; however, the alternative would have negative impacts on productivity, miner safety and possibly groundwater quality.

Mitigative technique/measure' (s): Both ponds will be reclaimed when bond is released by ODNR. The receiving stream will have returned to it's pre-mining condition or will be in conformance with the NPDES Permit. The area will be planted with vegetation in accordance with ODNR requirements.

C.4.d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

The water transfer system will be composed of pumps, discharge line and the two temporary ponds. One pump will be kept on standby in case of need during a breakdown period of the main pump. The pond will act as treatment facilities where the water can be colleted, monitored and treated as required to meet NPDES requirements. The cost of the pumps and piping will be approximately $10,000.00, (Ten Thousand Dollars) including a pump, a standby pump and one set of hoses. Reclamation of the site will cost approximately $50,000 (Fifty Thousand Dollars) based upon current costs.

Normal pump maintenance should be sufficient during the life of the permit. Normal maintenance on the pumps should be about $1,000.00 (One Thousand Dollars)annually.

C.4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged, in terms of mass and concentration.

No substances/regulated pollutants will be discharged from the treatment ponds in excess of effluent limitations. The water from the mine will be treated at the pond inlet to meet NPDES Requirements before being released to the receiving streams.

C.4.f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

The proposed excess water disposal system with associated environmental controls is the same or similar to those used successfully at the mine for many years, and in general, elsewhere throughout the coal industry. The site will be maintained to operate as designed. Repairs will be made as needed on a timely basis for full compliance with Federal and State laws.

C.4.g. Describe any impacts on human health and the overall quality and value of the water resource.

No adverse impacts on human health are anticipated under the Preferred Design Alternative. The water, which will be adversely affected by the mining operation, will be treated at the pond inlet to meet requirements of the Ohio Environmental Protection Agency's N.P.D.E.S. permit before being released to the receiving stream.

C.4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated.

Introduction

This question will be addressed in two parts: First, the general demand for electrical energy will be discussed and secondly, the aspects of the market which are specific to this project will be addressed. These are both areas of economic consideration which must be considered in regulation of the coal industry.

General Demand

Coal provides the most efficient and economical method of generating electrical energy and will continue to provide this service for a number of years in the future. More than half of the electrical energy consumed in the United States is generated by coal burning facilities. Over 80% of the electricity consumed in the State of Ohio is produced by coal fired power plants. (6 tons of coal is required to provide the electricity consumed by each individual annually).

Wind, solar, and hydro power generation methods are not capable of meeting the demand at this time. Nuclear energy represents too large a potential for long term environmental and safety impacts. The supply of natural gas is not sufficient nor is the distribution system adequate to meet the demands of the electrical generating industry.

The demand for electricity has increased by over 100% since 1970. Furthermore, there has been a disproportionately small increase in generating capacity during that time. Demand for electrical energy is projected to increase by another 30% to 40% between now and the year 2020. (References: State Senator Louis Blessing for the Ohio Coal Association, and Eric Burkland, President of the Ohio Manufacturers' Association)

Project Specifics

The loss to the local economy would be significant should the employment opportunity not be permitted to develop. The continuing operation of this mine depends upon this project. Belmont County, Ohio, the location of this operation, is categorized as a distressed county by the Ohio Department of Development, Office of Strategic Research. This means that unemployment is

125% or greater than the most recent U.S. 5 year average unemployment rate; per capita income is at or below 80% of the U.S. per capita income; and 20% or more of the population lives below the poverty level.

The mining operation associated with the air shaft site ponds supports the direct employment of 404 people,during the necessary life of the air shaft which is estimated to be 8 years. During this time, $22,595,156.00 *(Twenty Two Million, Five Hundred Ninety Five Thousand, One Hundred Fifty Six Dollars)* will be paid in annual payrolls. $1,723,843.00 *(One Million, Seven Hundred Twenty Three Thousand, Eight Hundred Forty Three Dollars)* will be paid in annual payroll taxes. Over $6,400,000.00 *(Six Million, Four Hundred Thousand Dollars)* in other taxes will be paid annually. $66,992 *(Sixty Six Thousand, Nine Hundred Ninety Two Dollars)* in annual Royalties will be paid.

In all, this mining operation contributes over $30,800,000.00 (Thirty Million, Eight Hundred Thousand Dollars) annually to the economy of this economically distressed area. This figure represents the value in current Dollars and does not account for inflation over the life of the operation.

It has been statistically proven that for every mining job created or maintained, between four and ten jobs are created or maintained in related industries or services. These related industries and services include: utility supply, transportation, material and fuel supply, and other activities which directly or indirectly support the mining operation. It may also include domestic services such as lawn and garden maintenance and day care and baby sitting services employed by the mining personnel and their families.

There are other benefits which will trickle down into the local economy. General merchants experience sales from the mine employees which they would not experience if the group were unemployed, were employed in other geographic locations, or were employed in lesser paying jobs.

C.4.i. **Describe environmental benefits to be realized through this proposed project.**

When the air shaft is no longer necessary for mine ventilation, it will be plugged and the entire site will be reclaimed in accordance with ODNR Requirements. Following establishment of vegetative cover, Ponds 020 and 021 will be removed and their respective affected areas reclaimed per ODNR regulations. Potential end uses include farm land, pasture for livestock, or wildlife habitat. No environmental benefits will be realized through this proposal.

C.4.j. **Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.**

There should be no loss of social or economic benefits from this operation. If the mine operation is not allowed to dispose of excess water in this manner, then the economic benefits outlined in section C.4.h. will not be maintained. The employment provided serves to improve economic conditions in the area.

The area is a rural site. It does not support any degree of tourist activity. Recreational activity includes hunting and ATV use only with the permission of the surface property owner. This activity will not be impacted in any way by the pumping of mine water to the ponds or reclamation of same.

The are no streams on site. All water that discharges as a result of the pumping operation will be treated, if necessary, to be within the effluent limits established by the existing NPDES Permit.

C.4.k. Describe the environmental benefits lost as a result of this project. Include the effects on aquatic life, wildlife, threatened or endangered species.

There are no significant adverse impacts expected to water quality on or off site. The maintenance, water monitoring, treatment and reclamation proposed have been designed to mitigate or eliminate any possible adverse affects on wildlife.

There are no known threatened or endangered species in the project area.

C.4.l. Description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

No construction will occur within the banks of any surface water. The surface water will receive discharge water from the ponds only. This discharge will be treated at the pond inlet to meet NPDES limitations before being released.

MINIMAL DEGRADATION ALTERNATIVE

C.4.a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long-range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

Please see response to this item on page 1 of this document.

C.4.b. List and describe all government and/or privately sponsored conservation projects that exist or may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the affected water resource.

Please see response to this item on page 1 of this document.

C.4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.

Please see response to this item (minimal degradation) on page 2 of this document.

C.4.d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

Under this alternative, the excess water disposal system will consist of installing sumps and bulkheads in the underground workings to contain the water. The installations would be made away from the working face so that interference with mining operations would be minimized; however failure of a bulkhead could jeopardize the safety of workmen or interfere with the mining operation. Due to unknowns such as where water will be encountered, the quantity of water that will require storage underground, and maintenance needs, cost is very difficult the estimate.

C.4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged, in terms of mass and concentration.

Please see response to this item on page 2 of this document.

C.4.f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

Please see response to item C.4.c. (Minimal Degradation Alternative) on page 2 of this document.

C.4.g. Describe any impacts on human health and the overall quality and value of the water resource.

Please see response to item C.4.c. (Minimal Degradation Alternative) on page 2 of this document.

C.4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated.

Please see response to this item on pages 3 and 4 of this document.

C.4.i. Describe environmental benefits to be realized through this proposed project.

Please see response to this item on page 4 of this document.

C.4.j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

Please see response to this item on page 4 of this document.

C.4.k. Describe the environmental benefits lost as a result of this project. Include the effects on aquatic life, wildlife, threatened or endangered species.

Please see response to this item on page 5 of this document. There are no known threatened or endangered species in the project area.

C.4.l. Description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

There are no fill or structures within a streambed on the site. Pond 020 is no closer than 80 feet from the stream bank, and Pond 021 is over 100 feet from the stream.

NON-DEGRADATION ALTERNATIVE

C.4.a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

Please see response to this item on page 1 of this document.

C.4.b. List and describe all government and/or privately sponsored conservation projects that exist or may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the affected water resource.

Please see response to this item on page 2 of this document. (Non-Degradation Alternative).

C.4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.

Please see response to this item on page 2 of this document. (Non-Degradation Alternative).

C.4.d. Outline of the treatment/disposal system evaluated, including the Costs associated with the equipment, installation, and continued operation and maintenance.

None of the three alternatives listed are practical from a cost, permitting, political/public relations, or operational standpoint. Please see response to this item on page 2 of this document (Non-Degradation Alternative).

C.4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged, in terms of mass and concentration.

Under the non-degradation alternative, no substances will be purposely discharged.

C.4.f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

No on-site discharge is proposed under this alternative. For reliability, see response to Item C.4.c. on Page 2.

C.4.g. Describe any impacts on human health and the overall quality and value of the water resource.

The potential for impacts to human health and the overall quality of the water resource would be much greater under the non-degradation alternatives than under either the preferred or minimal alternatives. There could be no protection provided for surface waters. Soil liners, diversion ditches, treatment ponds, hay bales, silt fences and temporary sumps are utilized in the Preferred Design Alternative. These features cannot be provided to protect all potential contamination sites in an overland operation which is not confined to permitted areas.

C.4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated.

The condition of the local economy and the economic benefits of this mining operation were discussed in earlier alternatives. In this situation, the non-degradation alternatives may actually shorten the life of the mine.

C.4.i. Describe environmental benefits to be realized through this proposed project.

If any of the non-degradation disposal plans are undertaken, there would be no direct change

in the existing environmental conditions. Ponds on the site could not be utilized for treatment or discharge of mine impacted water; however, the potential for unintentional (accidental), untreatable discharges would be much higher.

C.4.j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

It is impossible to estimate the social and economic losses as a result of public and political relations concerning difficulties related to rights of way and rights of entry required for crossing public and private lands and roads with trucks or a pipeline, as well as negotiating the agreements necessary to use another disposal facility. There is no commercial or recreational use of water resources involved.

C.4.k. Describe the environmental benefits lost as a result of this project. Include the effects on aquatic life, wildlife, threatened or endangered species.

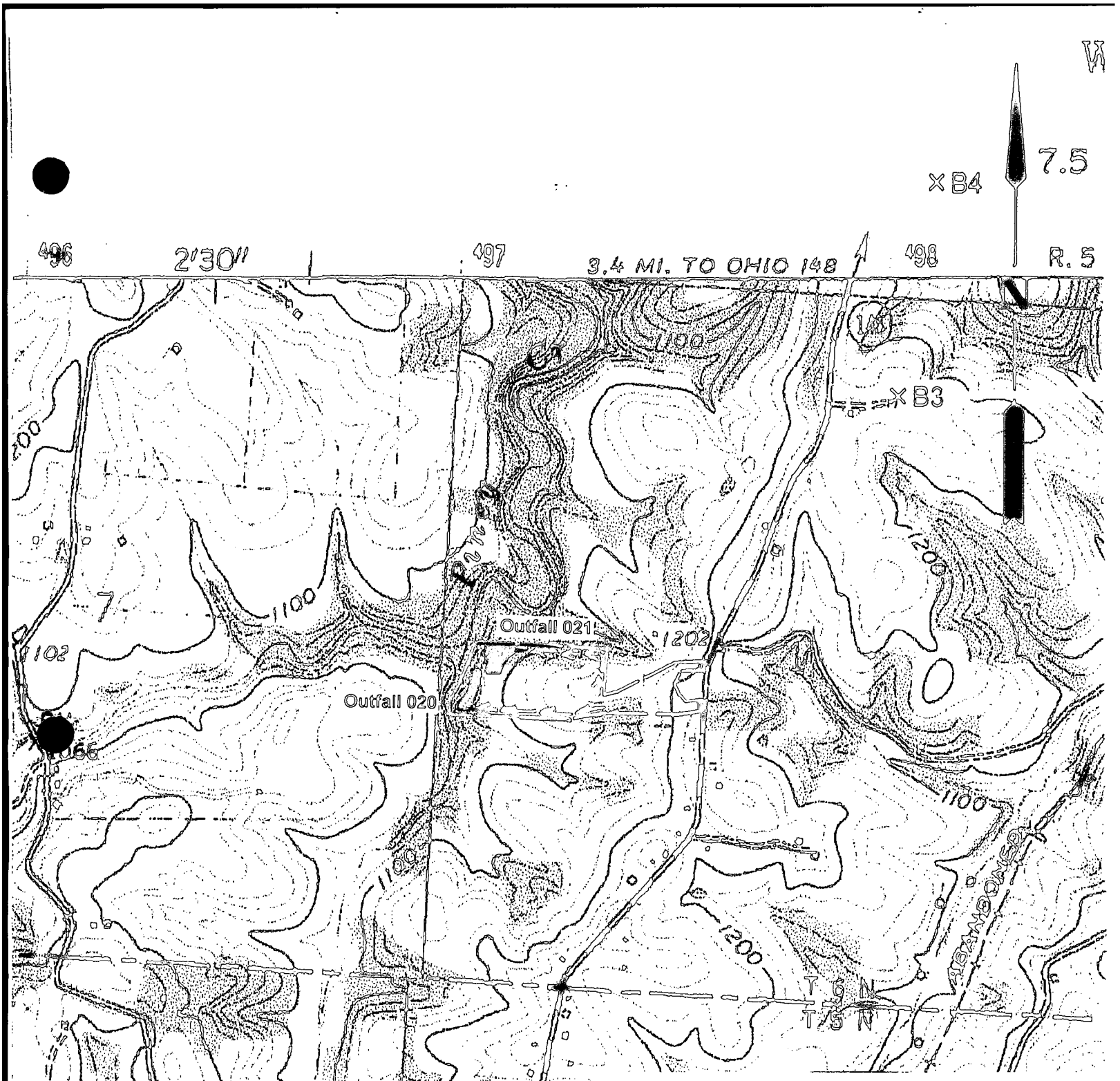
There could be unintentional, unforeseen impacts as previously described in item C.4.c. on page 2. If spillage from trucks or pipeline leakage occurred, the threat to aquatic life and wildlife could be far reaching, as well as difficult to detect or correct.

C.4.l. Description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

Under the non-degradation alternative, no construction work, fill or other structures would be placed in or near a stream bed.

Mitigative Technique/Measure'(s):

No mitigation is planned. Waters being discharged will be treated to meet requirements of the NPDES permit prior to being released to receiving waters.



LOCATION MAP

AMERICAN ENERGY CORPORATION
N.P.D.E.S. 0IL00091*ED / OH0059552 MODIFICATION
AND ANTIDEGRADATION ADDENDUM
PONDS 020 AND 021

ODNR PERMIT LIMITS, 17.2 ACRES

OUTFALL PONDS (EXISTING)

DIVERSION DITCHES (EXISTING)

SITUATED IN SECTION 1, T-6 R-5, WAYNE TOWNSHIP, BELMONT COUNTY, OHIO.

SCALE: 1" = 1000'